

SECTION II

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II – FOREST LAND INTERPRETATIONS

INTRODUCTION

Forest land interpretations are important to good forest land and woodland management. Landowners and managers can utilize them in planning, installing, and maintaining forest land or woodland management systems. The management of the trees begins with an understanding of the soil(s) on which they grow or are to be grown. Some soils are suitable for growing wood crops; others barely support tree cover. Different tree species may vary in production on the same soil.

Over the years, the procedures for interpretations on forest land have changed as well as where the data is stored. The official interpretations and associated data values and ratings can be found in the National Soil Information System (NASIS) and is supported on a national level. The National Soil Information System is the repository for this data set. Hard (paper) copies of these interpretations can be found in this subsection under “Forest Soil Interpretations.” Criteria for forestry interpretations is contained in the USDA-NRCS National Forestry Manual.

This subsection contains the following:

Explanation of Ordination Symbol – The ordination symbol is an outdated term used to relate individual soils or groups of soils to productivity. It is no longer used, but can be found referenced in older soil surveys.

Forest Land Management and Productivity Defined - The Forest Land Management or Woodland Management and Productivity Table, found in some published soil surveys or in the Soil Interpretation Record (SIR), presents information about the management and productivity of soils for producing wood crops. The information is presented by soil map unit in the soil survey area.

Forest Soil Interpretations – The actual forestland interpretations for various soils located within the USDA-NRCS Service Center area are found here.

II – FOREST LAND INTERPRETATIONS

EXPLANATION OF ORDINATION SYMBOL

The ordination symbol is an outdated term used to relate individual soils or groups of soils to productivity. It is no longer used, but can be found referenced in older soil surveys.

II – FOREST LAND INTERPRETATIONS

FOREST LAND MANAGEMENT AND PRODUCTIVITY DEFINED

The Forest Land Management or Woodland Management and Productivity Table, found in some published soil surveys or in the Soil Interpretation Record (SIR), presents information about the management and productivity of soils for producing wood crops. The information is presented by soil map unit in the soil survey area. Management concerns which may be covered include the probability of seedling survival, plant competition, susceptibility to burning damage from prescribed burning and wildfire, the relative danger of erosion when cover is removed, the resistance of trees to windthrow, soil compaction, revegetating exposed subsoil, firewood equipment limitations, and other equipment limitations. Ratings of “SLIGHT, MODERATE, or SEVERE” are used to indicate the major soil limitations. Information on potential productivity includes common trees, site index, productivity class, and trees to plant.

Management Concerns

Seedling Mortality. Refers to the probability of death of naturally occurring or viable, properly planted seedlings, as influenced by kinds of soil or topographic conditions. A rating of slight indicates that the expected mortality is less than 25 percent; moderate is 25 to 50 percent mortality; and severe is more than 50 percent mortality.

Plant Competition. This is the likelihood of the invasion of growth of undesirable species when openings are made by any source in the canopy. A rating of slight indicates little or no competition from other plants, moderate indicates competition may delay or hinder the development of a fully stocked stand of desirable trees; severe means that plant competition is expected to prevent the establishment of a desirable stand unless the site is intensively prepared, weeded, or otherwise managed for the control of undesirable plants.

Susceptibility to Burning Damage from Prescribed and Wildfire. This rating is a general guideline based on the susceptibility of damage to the soil from the loss of organic matter. A rating of slight indicates little or no loss of organic matter, moderate indicates some susceptibility to damage, and severe indicates a significant susceptibility to the loss of organic matter in the soil from burning.

Erosion Hazard. This is the probability that damage may occur as a result of site preparation, and following cutting operations where soil is exposed along roads, skid trails, log handling areas, and other disturbed areas. The risk of erosion is slight if the expected soil loss is small and no particular measures are needed; moderate if some

measures are needed to control erosion during silvicultural activities; and severe means a seasonal limitation, a need for special equipment or management, or other special precautions are needed to control erosion in most silvicultural activities.

Windthrow Hazard. Windthrow hazard is the likelihood of trees being uprooted (tipped over) by the wind as a result of insufficient depth of the soil to give adequate root anchorage. A rating of slight indicates that trees are not expected to be blown down by commonly occurring winds. Strong winds may break trees but they do not uproot them. Moderate indicates that an occasional tree may be blown down during periods of soil wetness with moderate or strong winds; and severe means that many trees are blown down during periods of excessive soil wetness and moderate or strong winds.

Soil Compaction. This is the likelihood of compaction in the upper 10 inches of the soil profile and/or the ease of mitigating the compaction. Slight indicates that considerable effort must be expended to compact the soil; moderate indicates that the soil can be compacted with moderate effort or that it is somewhat easily compacted and the compaction is readily mitigated; severe indicates that the soil is easily compacted and that the compaction is not readily mitigated.

Revegetating Exposed Subsoil. A rating of slight indicates there are few problems with revegetation; moderate indicates that additional care is needed in choosing methods or types of plants for erosion control; severe indicates that intensive and expensive measures would be needed to establish erosion control.

Firewood Equipment Limitations. These are ratings made for the use of pickup trucks and trailers commonly used for firewood harvesting. A rating of slight indicates that there are few limitations for the use of the equipment; moderate indicates that care is needed when gathering firewood; and severe indicates that serious consideration should be given to using other methods of firewood harvesting or postpone cutting for firewood.

Equipment Limitations. These interpretations are limits on the use of equipment, year round or seasonally, as a result of soil characteristics. A rating of slight indicates that the use of equipment is not limited in the kind or time of year because of soil factors; moderate indicates a short seasonal limitation or some need for modification in the management of equipment; and severe indicates a seasonal limitation, a need for special equipment or management, or a hazard in the use of the equipment.

Potential Productivity

Potential productivity is based upon the site index of an indicator species. An indicator species most generally is the species that is common in the area and is generally most productive on the soil. Potential productivity is normally expressed in terms of cubic meters of wood per hectare per year of the indicator species.

Common Trees. These are the trees that generally occur on the soil regardless of economic importance.

Site Index. A measure of the quality of a site based upon the height of dominant trees at a specified age.

Productivity Class. A number that denotes the potential productivity derived from the site index in terms of cubic meters of wood per hectare per year. For example, a productivity class of 1 means 1 cubic meter per hectare per year (14.3 cubic feet per acre per year) while 10 means 10 cubic meters per hectare per year (143 cubic feet per acre per year) for a fully stocked natural stand.

Trees to Plant. A list of the one or more adapted species for producing wood crops on the soil.

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FOREST SOIL INTERPRETATIONS

Forestland Interpretations for various soils located in the USDA-NRCS Service Center area are contained here.